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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/554,650	07/20/2012	Volker Linne	MF-US155190	7928

22919 7590 02/03/2017

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EXAMINER
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ART UNIT	PAPER NUMBER
1774	

NOTIFICATION DATE	DELIVERY MODE
02/03/2017	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VOLKER LINNE and SASAN HABIBI-NAINI

Appeal 2015-006102
Application 13/554,650
Technology Center 1700

Before JAMES C. HOUSEL, WESLEY B. DERRICK, and DEBRA L. DENNETT, *Administrative Patent Judges*.

HOUSEL, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

Pursuant to 35 U.S.C. § 134(a), Appellants[2] appeal from the Examiner's decision finally rejecting claims 1–3, 5–14, and 16 under 35 U.S.C. § 102(b) as anticipated by, or alternatively under 35 U.S.C. § 103(a)

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[1] Our decision refers to the Specification (Spec.) filed July 20, 2012, Appellants' Appeal Brief (Appeal Br.) filed November 18, 2014, the Examiner's Answer (Ans.) mailed April 2, 2015, and Appellants' Reply Brief (Reply Br.) filed June 1, 2015.

[2] According to Appellants, the real party in interest is Sulzer Mixpac AG. Appeal Br. 2.

as unpatentable over Keller.[3] We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We REVERSE.

STATEMENT OF THE CASE

"The invention relates to a static mixer including an installation body for installation into a tubular mixer housing." Spec. ¶ 2. Claim 1, reproduced below from the Claims Appendix to the Appeal Brief, is illustrative of the subject matter on appeal.

1. A mixing element for a static mixer for installation into a tubular mixer housing,
wherein the mixing element has a longitudinal axis along which a plurality of installation bodies are arranged behind one another,
wherein a first installation body has a first wall element which extends in the direction of the longitudinal axis and has a first side wall and a second side wall which is arranged opposite the first side wall,
wherein a deflection element is arranged adjacent to the first wall element of the first installation body and the deflection element has a deflection surface extending in the transverse direction to the first wall element of the first installation body at both sides of the first wall element of the first installation body,
wherein a first opening is provided in the deflection surface at the side which faces the first side wall of the first wall element of the first installation body,
wherein a second and third wall element are arranged adjacent to the first opening,
wherein the second and third wall elements extend in the direction of the longitudinal axis and each have an inner wall

[3] US 2008/0232191 A1, published September 25, 2008 ("Keller"). Appellants state, without dispute, that Keller corresponds to EP 1426099 A1, published June 9, 2004. Appeal Br. 14; Reply Br. 6

> and an outer wall which extend substantially in the direction of the longitudinal axis and each of the inner walls and outer walls include an angle between 20° and 160° to the first or second side walls of the first wall element of the first installation body,
>
> wherein the first opening is arranged between the inner walls of the second and third wall elements and a second opening is arranged outside one of the outer walls of the second or third wall elements,
>
> wherein the second opening is provided in the deflection surface at the side which faces the second side wall of the first wall element of the first installation body,
>
> wherein a first wall element of a second installation body adjoins the second and third wall elements, wherein more than five installation bodies are connected to one another via a common bar element, and
>
> wherein all installation bodies of the mixing element are connected by the common bar element.

ANALYSIS

In both the anticipation and obviousness rejections, the Examiner finds, and Appellants dispute, that Keller either teaches or suggests a mixing element having more than five installation bodies, wherein all installation bodies of the mixing element are connected by a common bar element. Thus, a dispositive issue before us in this appeal with regard to both the Examiner's anticipation and obviousness rejections is whether Appellants have identified reversible error in these findings. We answer this question in the affirmative and, therefore, will not sustain the Examiner's rejections.[4]

[4] Because we find Appellants' arguments persuasive with regard to the claim limitations directed to a common bar element connecting more than five installation bodies together, wherein all installation bodies of the mixing element are connected by the common bar element, we need not reach Appellants' remaining arguments and render no judgment as to their merit.

The Examiner finds, *inter alia*, that Keller teaches "more than five installation bodies are connected to one another via a common bar element." Ans. 6, citing Keller, Fig. 17, items 50, 51, 54, 55. The Examiner also finds that Keller "shows five installation bodies connected using common bar elements." *Id.*, citing Keller, Fig. 15, item 47. Moreover, the Examiner finds "Keller states the longitudinal webs 'might as well be attached to any mixing group' (Keller: paragraph 0065), making clear that any number of mixing elements could be attached to each other using bar elements, including numbers greater than five." *Id.* The Examiner further finds "Keller discloses all installation bodies of the mixing element are connected by means of a common bar element," in particular "connecting the first six installation bodies of the mixing element." *Id.* (emphasis omitted), citing Keller, Fig. 15, item 54; *see also*, Ans. 19–21.

To the extent that Keller does not disclose all of the installation bodies are connected by the common bar element, the Examiner concludes that such would have been obvious because Keller teaches "to optimize the layer formation, longitudinal webs are provided which connect the double guide walls on the outside…the longitudinal webs are attached to the first and second mixing groups, but they might as well be attached to the third or any other mixing group." *Id.* at 17, citing Keller, ¶ 65. The Examiner finds this passage clearly indicates the longitudinal webs could be present between any or all installation bodies and also provides wall layer formation optimization as the motivation for doing so. *Id.*

To the contrary, Appellants contend that Keller fails to teach or suggest more than five installation bodies connected by a common bar element, nor the common bar element connecting all installation bodies of

the mixing element. Appeal Br. 11–15; Reply Br. 3–5. Appellants urge that the Examiner appears to be combining elements from the separate embodiments of Figures 1, 15, and 17. Appeal Br. 12. In addition, Appellants assert that Keller's Figure 15 depicts mixing groups 47, 48, 49 as distinct elements that are not each connected by the webs 54, but that the units (installation bodies) within mixing groups 47 and 48 are connected. *Id.* Further, Appellants urge that web 54 does not run along the length of all installation bodies, or even in a set of six installation bodies. *Id.* ("At most, there are five installation bodies (47a–47e) connected via longitudinal webs 54.") Moreover, Appellants argue that Keller's paragraph 65 merely states that a longitudinal web may be attached to the third mixing group or to any other mixing group, and not to connect more than five installation bodies. *Id.* at 14.

Finally, Appellants contend that the Examiner's conclusion that it would have been obvious to connect all the installation bodies of the mixing element together is based on improper hindsight reasoning. *Id.* Appellants urge that not only does Keller not disclose more than five installation bodies connected by a common bar element, but that the Specification states that there can only be a maximum of five installation bodies connected in Keller due to problems in manufacturing and use. *Id.*

After review of the opposing positions articulated by the Examiner and Appellants, the applied prior art, and Appellants' claims and Specification disclosures, we determine that Appellants' arguments are sufficient to identify reversible error in the Examiner's anticipation and obviousness rejections. Accordingly, we will not sustain the stated

rejections for substantially the reasons set forth by Appellants in the Appeal and Reply Briefs.

We first note that, though the Examiner finds Keller teaches six installation bodies together, the Examiner does not demonstrate how any of Keller's embodiments include a common bar element connecting more than five installation bodies. Keller's Figure 15 depicts a common bar element connecting at most five installation bodies together, e.g., the five installation bodies of mixing group 47. No common bar element or longitudinal web 54 connects installation bodies 47e and 48a, or installation bodies 49b, 49c, 49d, and 49e. Keller's Figure 17 depicts even fewer installation bodies connected by a common bar element, i.e., the three installation bodies of mixing group 47. Keller's Figure 1 has no common bar element whatsoever. In addition, none of these embodiments depicts all installation bodies of the mixing element being connected by a common bar element.

Keller describes the use of longitudinal webs connecting double guide walls on the outside "[t]o optimize the layer formation," which refers to the formation of the guide and inner walls of the installation bodies. Keller ¶ 65. Keller further indicates that these longitudinal webs need not be provided in all mixing groups, that they are attached to the first and second mixing groups, and notes that "they might as well be attached to the third or to any other mixing group." *Id.* Although the Examiner finds that this description "indicates that the longitudinal webs could be present between any or all installation bodies and that one skilled in the art would be motivated to do so to optimize layer formation" (Ans. 17), we disagree that this constitutes a teaching or suggestion for connecting mixing groups via a bar element common to all installation bodies. Keller teaches that the

longitudinal web may be used to connect the installation bodies within a mixing group, but not between mixing groups. Thus, Keller teaches that these longitudinal webs may be used to connect the installation bodies within any or all of the mixing groups, none of which are taught to contain more than five installation bodies, and not between mixing groups as the Examiner finds.

We are persuaded that the Examiner reversibly erred in finding that Keller either teaches or suggests more than five installation bodies connected by a common bar element and that all installation bodies of the mixing element are connected by the common bar element. Under these circumstances, it cannot be said that Keller anticipates the claimed invention. *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990).

Nor can we conclude that the Examiner has met the minimum threshold of establishing obviousness under 35 U.S.C. § 103(a), as the Examiner's conclusion lacks sufficient rational underpinning. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."), *quoted with approval in KSR,* 550 U.S. at 418.

Accordingly, we reverse the Examiner's prior art rejections of claims 1–3, 5–14, and 16 under 35 U.S.C. § 102(b), and alternatively under 35 U.S.C. § 103(a), for the reasons given above and presented by Appellants.

DECISION

Upon consideration of the record, and for the reasons given above and in the Appeal and Reply Briefs, the decision of the Examiner rejecting claims 1–3, 5–14, and 16 under 35 U.S.C. § 102(b) as anticipated by, or alternatively under 35 U.S.C. § 103(a) as unpatentable over, Keller is *reversed*.

REVERSED